Amendments to the Claims

The listing of claims below will replace all prior versions and listings of claims in the application.

1. (Canceled)

2. (Canceled)

3. (Currently Amended)   A method for presenting three-dimensional computer graphics images using multiple graphics processing units, comprising the steps of:

     (1)   ~~allocating, to the multiple graphics processing units,~~ allocating three-dimensional computer graphics data to rectangular subvolumes that define a scene such that said allocated three-dimensional computer graphics data corresponds to a portion of ~~a~~ the scene that lies within the rectangular subvolumes to which the multiple graphics processing units have been assigned;

     (2)   rendering, by the multiple graphics processing units, said allocated three-dimensional computer graphics data;

     (3)   combining said rendered three-dimensional computer graphics data, thereby producing a three-dimensional computer graphics image; and

     ~~(4)   presenting, for viewing, said combined three-dimensional computer graphics image;~~

~~wherein a measure of a first dimension of a first rectangular subvolume of the~~

~~rectangular subvolumes is different from a measure of the first dimension of a second~~

~~rectangular subvolume of the rectangular subvolumes.~~

(4)   selecting one of presenting a first set of said combined three-dimensional

computer graphics data and combining, at a second stage image combiner, the first set of said

combined three-dimensional computer graphics data received directly from a first first stage

image combiner with a second set of said combined three-dimensional computer graphics

data received directly from a second first stage image combiner.

4. (Currently Amended) The method of claim 13, wherein said combining further comprises

the step of:

(7) (6) ordering said rendered three-dimensional computer graphics data based on

locations between said determined viewing position and the rectangular ~~subvolumes to which~~

~~the multiple graphics processing units have been assigned.~~ subvolumes.

5. (Previously Presented) The method of claim 3, wherein said combining further comprises

the step of:

(5)   blending said rendered three-dimensional computer graphics data.

6-8. (Canceled)

9. (Currently Amended)   A system for presenting three-dimensional computer graphics

images, comprising:

memory ~~for storing~~ configured to store three-dimensional computer graphics data;

at least one graphics processing unit ~~for rendering~~ configured to render a portion of the three-dimensional computer graphics data that corresponds to rectangular subvolumes to which said at least one graphics processing unit is assigned;

a bus ~~for communicating~~ configured to communicate a viewing position to each of said at least one graphics processing unit; and

at least one image combiner ~~for combining~~ configured to combine the three-dimensional computer graphics data rendered by said at least one graphics processing unit to produce a three-dimensional computer graphics image;

~~wherein a measure of a first dimension of a first rectangular subvolume of said rectangular subvolumes is different from a measure of the first dimension of a second rectangular subvolume of said rectangular subvolumes.~~

wherein at least two first stage image combiners of said image combiners are configured to be selectively coupled directly to one of an output device and a second stage image combiner of said image combiners.

10. (Previously Presented) The system of claim 9, wherein said memory comprises memory cells such that each of said memory cells is accessible by only one of said at least one graphics processing unit.

11. (Canceled)

12. (Canceled)

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13. (Currently Amended) The method of claim 3, further comprising, before step (2), the
steps of:

     (5)   determining a viewing ~~position; and~~ position.

     ~~(6)~~   ~~communicating said determined viewing position to the multiple graphics~~
~~processing units.~~

14-16. (Canceled)

17. (New) A method for presenting three-dimensional computer graphics images,
comprising the steps of:

     (1)   allocating three-dimensional computer graphics data to rectangular
subvolumes that define a scene;

     (2)   rendering said allocated three-dimensional computer graphics data;

     (3)   combining a first set of said rendered three-dimensional computer graphics
data and a second set of said rendered three-dimensional computer graphics data; and

     (4)   selecting one of presenting a first set of said combined three-dimensional
computer graphics data and combining, at a second stage combiner, the first set of said
combined three-dimensional computer graphics data received directly from a first first stage
combiner with a second set of said combined three-dimensional computer graphics data
received directly from a second first stage combiner.

18.   (New)   A system for presenting three-dimensional computer graphics images,
comprising:

      memory configured to store three-dimensional computer graphics data;

      graphics processing units configured to render portions of the three-dimensional
computer graphics data that correspond to rectangular subvolumes to which said graphics
processing units are assigned;

      a bus configured to communicate a viewing position to each of said graphics
processing units; and

      combiners configured to combine the three-dimensional computer graphics data
rendered by said graphics processing units to produce a three-dimensional computer graphics
image;

      wherein at least two first stage combiners of said combiners are configured to be
selectively coupled directly to one of an output device and a second stage combiner of said
combiners.

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